

LISTING OF CLAIMS

This listing of claims will replace all prior versions, and listings of claims in the application:

1. **(original)** A method of modifying development of a plant comprising transforming a plant cell with a nucleic acid encoding a plant cyclin-dependent kinase inhibitor polypeptide to produce a transformed plant cell; and, growing the transformed plant cell or progeny of the transformed plant cell to produce a transformed plant under conditions wherein the plant cyclin-dependent kinase inhibitor polypeptide is expressed in a proliferative tissue of the transformed plant to inhibit development of a differentiated tissue in the plant.
2. **(currently amended)** The method of claim 1, wherein the nucleic acid encoding the cyclin-dependent kinase inhibitor is homologous to ICK1, ~~ICK2, ICN2, ICN6 or ICN7~~.
3. **(currently amended)** The method of claim 1, wherein the nucleic acid encoding the cyclin-dependent kinase inhibitor is ~~selected from a group consisting of ICK1, ICK2, ICN2, ICN6 and ICN7~~.
4. **(currently amended)** The method of claim 1, wherein the cyclin-dependent kinase inhibitor polypeptide is at least 70% identical, when optimally aligned, to ICK1, ~~ICK2, ICN2, ICN6 or ICN7~~.
5. **(currently amended)** The method of claim 1, wherein the cyclin-dependent kinase inhibitor polypeptide is ~~selected from a group consisting of ICK1, ICK2, ICN2, ICN6 and ICN7~~.
6. **(original)** The method of claim 1, wherein the plant is a member of the *Cruciferae* family.

7. (original) The method of claim 1, wherein the plant is a member of the *Brassica* genus.

8. (original) The method of claim 1, wherein the nucleic acid encoding the cyclin-dependent kinase inhibitor polypeptide is operably linked to a constitutive promoter.

9. (original) The method of claim 1, wherein the nucleic acid encoding the cyclin-dependent kinase inhibitor polypeptide is operably linked to a tissue-specific promoter.

10. (cancelled).

11. (original) The method of claim 9, wherein the tissue-specific promoter is the AP3 promoter.

12. (original) The method of claim 9, wherein the tissue-specific promoter mediates expression of the nucleic acid encoding the cyclin-dependent kinase inhibitor polypeptide in petal or stamen primordia.

13. (currently amended) The method of claim 1 wherein modifying the development of the plant the tissue in the plant is modified so that makes the plant is male sterile.

14. (original) The method of claim 1 wherein the development of the tissue in the plant is modified so that petals on the transformed plant are altered or absent.

15. (currently amended) A transgenic plant comprising an expressible heterologous nucleic acid encoding a cyclin-dependent kinase inhibitor polypeptide capable of inhibiting a cyclin-dependent kinase, wherein the heterologous nucleic acid is introduced into the transgenic plant, or an ancestor of the transgenic plant by the method of claim 1.

16. (cancelled)

17. (cancelled)

18. (original) A transgenic plant having a recombinant genome comprising a heterologous nucleic acid encoding a cyclin-dependent kinase inhibitor that is expressed in a proliferative tissue of the transformed plant to inhibit development of a differentiated tissue in the plant.

19. (cancelled)

20. (currently amended) A transgenic plant tissue derived obtained from the transgenic plant of claim 18.

21. (original) The plant tissue of claim 20 wherein the tissue is selected from the group consisting of a seed and a flower.

22. (original) A method of growing the transgenic plant of claim 18, comprising growing the plant under conditions so that the cyclin-dependent kinase inhibitor polypeptide is expressed in a proliferative tissue of the transformed plant to inhibit development of a differentiated tissue in the plant.

23. through 26. (cancelled)

27. (original) A method of modifying development of a plant comprising transforming a plant cell with a nucleic acid encoding a plant cyclin-dependent kinase inhibitor polypeptide to produce a transformed plant cell; and, growing the transformed plant cell or progeny of the transformed plant cell to produce a transformed plant under conditions wherein the plant cyclin-dependent kinase inhibitor polypeptide is expressed in a proliferative tissue of the transformed plant to change the ploidy of a differentiated tissue in the plant.

28. (new) The method of claim 1, wherein the nucleic acid encoding the cyclin-dependent kinase inhibitor comprises:

a nucleic acid sequence as set forth in SEQ ID NO: 1;
a nucleic acid sequence as set forth in SEQ ID NO: 3; or
a nucleic acid sequence having at least 95% sequence identity with a nucleic acid sequence set forth in SEQ ID NO: 1 or SEQ ID NO: 3.

29. (new) The method of claim 1, wherein the nucleic acid encoding the cyclin-dependent kinase inhibitor comprises a nucleic acid sequence as set forth in SEQ ID NO: 1 or 3.

30. (new) A method of modifying floral development of a plant, comprising transforming a plant cell with a nucleic acid encoding an *Arabidopsis* cyclin-dependent kinase inhibitor polypeptide to produce a transformed plant cell; and growing the transformed plant cell or progeny of the transformed plant cell to produce a transformed plant, wherein the plant cyclin-dependent kinase inhibitor polypeptide is expressed in petal or stamen primordia of the transformed plant to inhibit floral development.

31. (new) The method of claim 30, wherein the *Arabidopsis* cyclin-dependent kinase inhibitor polypeptide is encoded by a nucleic acid comprising:
a nucleic acid sequence as set forth in SEQ ID NO: 1;
a nucleic acid sequence as set forth in SEQ ID NO: 3; or
a nucleic acid sequence having at least 95% sequence identity with a nucleic acid sequence set forth in SEQ ID NO: 1 or SEQ ID NO: 3.

32. (new) A method of modifying development of a plant, comprising:
transforming a plant cell with a nucleic acid encoding an *Arabidopsis* cyclin-dependent kinase inhibitor polypeptide to produce a transformed plant cell; and
growing the transformed plant cell or progeny of the transformed plant cell to produce a transformed plant, wherein expression of the plant cyclin-dependent kinase inhibitor polypeptide decreases ploidy of a differentiated tissue in the plant.

33. (new) The method of claim 32, wherein the *Arabidopsis* cyclin-dependent kinase inhibitor polypeptide is encoded by a nucleic acid comprising:

- a nucleic acid sequence as set forth in SEQ ID NO: 1;
- a nucleic acid sequence as set forth in SEQ ID NO: 3; or
- a nucleic acid sequence having at least 95% sequence identity with a nucleic acid sequence set forth in SEQ ID NO: 1 or SEQ ID NO: 3.